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ABSTRACT

Soviet children enter elementary school at age 6 or 7. After 4 years of elementary school with the same teacher, they enter secondary school, and after 4 years there, Soviet children earn what might be called a partial secondary certificate. They may then leave school at age 14 or 15. If a student chooses to attend a vocational school or higher-level technical school, the training lasts for 3 years with required on-the-job training. A student may also choose to continue in secondary school for 3 years and then study in a vocational school for 1 year of job-related vocational training or in an institute or university for 5 years. Teachers are prepared in pedagogical institutes. The United States can learn a great deal from the Russian educational system with regard to its emphasis on culture and its close working relationship with local industry. The Soviet system could learn from the United States' experience in demonstrating the practical use of science and mathematics and providing students with access to such tools as computers. (YLB)

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TECHNICAL EDUCATION IN RUSSIA: EXCHANGING EDUCATIONAL VALUES

Presented at

American Vocational Association Conference

by

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Fifteen vocational and technology teachers from the state of Colorado visited Russia's technical education system during the last two weeks of December, 1989. The purpose of our trip was to visit both vocational and academic schools and to understand the structure of education in Russia. Most of our time was spent in Leningrad, a city of 6 million.

In February, 1990, 15 Russian technical educators visited Washington, DC and Colorado. The 15 technical educators stayed in the homes of the U.S. citizens who visited Russia in December. During their visit they saw technology education programs, community colleges, and the public school systems from elementary through university level.

OVERVIEW OF THE RUSSIAN EDUCATIONAL SYSTEM

The following is an overview of the Russian school system. This overview was provided by Svetlana Arkhangelskaya, our Russian interpreter and an English teacher in Russia.

> Students attend nursery school from ages one to three. Kindergarten is from ages three to six or seven. The kindergartens in the Soviet Union are very similar to the day care centers in the United States, except that they are open a little bit longer at night. There are three meals provided at a kindergarten--breakfast, lunch,

and a late afternoon light meal. Supper is typically prepared at home in the late evening.

At age six or seven, a Soviet child can enter elementary school. The decision is up to the parents. Then come four years of elementary school with the same teacher for the four year period. The teacher follows the students through for that four year period, except for physical education and music. At age ten or eleven (or after four years of schooling) the child will enter secondary school. After four additional years of education, basically similar to our grades five through eight, they earn a certificate. We might think of it as a partial secondary certificate. They may leave school at that point. That means they can leave school at age 14 or 15.

After the students leave, they can choose to either attend a vocational school or a higher level technical school. If they do that, the technical training is typically three years, which would take them to our equivalent of 11th grade. Plus, they are required to have on-the-job training. The on-the-job training occurs during the three years of vocational school. So they have the academic subjects, the vocational subjects, plus on-the-job training.

If a student were going to go on to college, other than a vocational or technical school, after the eighth grade the student would continue in secondary school

through the 11th grade. Students taking the academic route then have several choices: they could go to (1) an institute, (2) a university, or (3) a vocational school. If they choose to go to the vocational school, they will only be required to have one year of vocational training--job related vocational training. They would not be required to take the academic portion since they have already earned that in the secondary school program.

At either the institute, which is similar to our college, or the university, which is similar to our university system, students study for five years to earn what's called a "Diploma of Higher Education." Some of the higher education institutions are referred to as "academies." For example, in Leningrad there is an Agricultural Academy.

Although the Soviet Union has a national curriculum and tests are given at the end of each year (a nationally developed exam) in each of the grade levels in the secondary schools, there are specialized schools. For example, there are specialized schools in the following subject areas: languages (English, German, French, Spanish, Italian, etc.), mathematics, physical education, and painting.

Pedagogical institutes are of special interest here. Pedagogical institutes are the same as other institutes except they have a series of courses on pedagogy (the history of education and modern teaching methods). That

is the way that the pedagogical institutes differ from institutes with other specializations. In order to teach in the Soviet Union, you must have a degree from a pedagogical institute.

WHAT WE CAN LEARN FROM THE RUSSIAN EDUCATIONAL SYSTEM

One of the areas where we can learn a great deal from the Russian educational system is their emphasis on culture. Their knowledge in geography, history, the performing arts, and language appears to be far superior to ours. We observed that most Russian youth are active and talented in at least one area of the performing arts, for example, dance or music. Most students spoke at least two languages. This emphasis on culture was also present in the vocational schools.

As our literature so frequently points out, Russian youth outperform many industrialized countries, including the United States, in the areas of mathematics and science. Even in vocational schools the students receive a strong blend of academics and are exposed to a variety of cultural activities. We in the United States are just beginning to understand the importance of integrating academic knowledge into vocational programs with the reauthorization of the Carl D. Perkins Vocational and Applied Technology Act of 1990. We felt like "uncultured Americans" when compared to the common cultural knowledge of the Russian educators and students we met.

Many of the programs we visited had a very close working relationship with local industry, including extremely high placement rates in industries which were connected with them.

One of the trends in the Russian vocational education system is an emphasis on two-way communication between the work place and the school.

WHAT THEY CAN LEARN FROM US

Although test scores in science and mathematics for Russia are among the highest in the world, it was interesting as a team of technology educators to observe that the practical use of that mathematics and science was seldom demonstrated. Many of the technical schools that we visited lacked adequate technical teaching tools of the quality and quantity to which we are accustomed in America. Computers were used, but on a limited basis.

The infrastructure of Russia was also a clear indication of the lack of the country as a whole to utilize the science and mathematical base that is apparent in their space program. The quality of the goods produced, that we saw, was not competitive with the quality of goods from other industrialized countries.

Our technology and vocational students learn by doing. We are so fortunate to be able to expose our students to the technical tools used today. While we are complaining about our old computers, or that we need a new CNC machine, the Russian youth are trying to acquire everyday necessities such as paper and pencils.

During the Russian's visit to the United States in February, our Russian friends were shocked at the following items:

- junk yards
- water beds

- motor home and travel trailers
- automobiles
- the size of American homes
- white boards and colored markers
- electronic car and home entertainment equipment
- supermarkets
- department stores
- tequila and Kentucky bourbon
- lawn equipment such as hedge trimmers and weed eaters

Sveta explained to one of our undergraduate classes just how lucky they are. The day that she visited a technology education class at Colorado State University, the professor passed out a ten page document with a variety of graphics. She explained that in Russia when she teaches her classes that if she wants to provide a handout, she has to type each handout separately, and any graphics are done by hand.

CONCLUSION

The most striking and lasting impression from the Russia trip was the devastation of the Russian economy. It is very difficult for Russian citizens to acquire quality goods, but of a far greater concern was the difficulty in acquiring food. Food lines were the rule rather than the exception.

We had an experience of a lifetime, which has caused us some reflection. We are so fortunate in this country. Our economic and political systems permit us to make choices. The ability to make choices is an important aspect of our freedom. Our press not only keeps us informed, but it causes us to always question

what we are doing and how we are doing it. We have access to shopping malls that have goods from around the world. Our youth make daily decisions like:

- What videotape should I watch?
- Pepsi or Coke?
- Wranglers or Lees?
- What church should I go to?
- McDonalds or Hardies?
- Banana or apple?
- Peas or corn?
- Which magazine should I read?
- Whose car are we going to take to the mall?

Russian youth would love to be able to make such choices. The American dream includes opportunities to: 1) do anything you want to do, and 2) be whatever you want to be. <u>We have the freedom to succeed or fail.</u> This freedom cannot be taken lightly. We are truly blessed to live in the United States of America.